

Assessment Schedule – 2005

Economics: Understand marginal analysis and the behaviour of firms (90629)

Evidence Statement

Code	Question	Evidence					Achievement	Merit	Excellence																		
A	ONE (a)	<table><tr><td>Number of Sellers</td><td>D</td><td>D</td><td>B</td><td>C</td></tr><tr><td>(i) Nature of product</td><td>A</td><td>B</td><td>B</td><td>C</td></tr><tr><td>(ii) Control over price</td><td>C</td><td>B</td><td>A</td><td>A</td></tr></table>					Number of Sellers	D	D	B	C	(i) Nature of product	A	B	B	C	(ii) Control over price	C	B	A	A	Any SIX correct.					
Number of Sellers	D	D	B	C																							
(i) Nature of product	A	B	B	C																							
(ii) Control over price	C	B	A	A																							
A	(b) (i) (ii)	Duopoly: eg Qantas or Air NZ (main trunk routes), Telecom or Vodafone. Monopsony: eg Fonterra (98% of milk from farms bought by them).					BOTH correct.																				
A	(c)	“Book on-line”, or Having a web site, or Having a company logo (Econ Air)					One correct strategy identified.																				
A	(d)	Eg Because it is more convenient for some customers to buy on-line, more customers will book their travel with this company resulting in an increase in market share for Econ Air.					The description shows the idea that <i>this company</i> will gain market share – ie that more people will purchase their travel with this company.																				
A#	TWO (a)	<table><tr><th colspan="3">TABLE 1 Angela Agassi's Utility Schedule for Tennis Balls</th></tr><tr><th>Quantity Consumed</th><th>Total Utility (\$)</th><th>Marginal Utility (\$)</th></tr><tr><td>1</td><td>60</td><td>60</td></tr><tr><td>2</td><td>100</td><td>40</td></tr><tr><td>3</td><td>120</td><td>20</td></tr><tr><td>4</td><td>125</td><td>5</td></tr></table>					TABLE 1 Angela Agassi's Utility Schedule for Tennis Balls			Quantity Consumed	Total Utility (\$)	Marginal Utility (\$)	1	60	60	2	100	40	3	120	20	4	125	5	All FOUR correct.		
TABLE 1 Angela Agassi's Utility Schedule for Tennis Balls																											
Quantity Consumed	Total Utility (\$)	Marginal Utility (\$)																									
1	60	60																									
2	100	40																									
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A	TWO (b)	See Appendix A. (1) Title (2) Axes (Scale is even on both axes.) (3) Plotting (Points accurately plotted [with X] on quantity [not mid point] and accurately joined with connecting line.) (4) Curve (Labelled with D.)	FOUR of 1, 2, 3, 4 correct.																
A or M#	(c)	Angela will purchase packs of tennis balls, until she reaches the point where $P=MU$ (optimal purchase rule). When the price of tennis balls falls, $P<MU$. Because $P<MU$, there is an incentive for Angela to increase her consumption of tennis balls. As she consumes additional units, MU will fall. Consequently, consumer equilibrium will be restored at a lower price and a corresponding lower marginal utility ($P'=MU'$). A rational consumer (like Angela) will thus increase the quantity she purchases when the price of the good falls.	Shows an understanding of the optimal purchase rule by stating a correct relationship between price and marginal utility.	Provides a full explanation, ie makes THREE or more correct statements to do with the change in the relationship between price and marginal utility as a result of a fall in the price of a good.															
A	(d)	<ul style="list-style-type: none">Her income increases / tax falls → increase HDI.The price of a complement falls (eg tennis subs or tennis rackets).Taste change towards tennis (eg move from winter to summer / more matches shown on TV).	THREE correct answers (that are examples of different determinants of demand).																
A	(e)	A decrease in price causes a movement along the demand curve, NOT a shift of the demand curve to the right (as required to cause an increase in demand).	Recognises price causes movement along , NOT a shift of, D curve.																
A	THREE (a)	<table><tr><th colspan="2">Supply Schedule</th></tr><tr><th>Price (\$)</th><th>Quantity</th></tr><tr><td>10</td><td>0</td></tr><tr><td>20</td><td>0</td></tr><tr><td>30</td><td>45</td></tr><tr><td>40</td><td>50</td></tr><tr><td>50</td><td>54</td></tr></table>	Supply Schedule		Price (\$)	Quantity	10	0	20	0	30	45	40	50	50	54	At least FOUR quantities correct.		
Supply Schedule																			
Price (\$)	Quantity																		
10	0																		
20	0																		
30	45																		
40	50																		
50	54																		

Code	Question	Evidence	Achievement	Merit	Excellence																												
A	THREE (b)	As additional units of variable inputs are added to a fixed input, marginal product will eventually fall.	Correct definition.																														
A#	(c) (i)	<table><tr><th colspan="4">TABLE 2 Productivity of Workers</th></tr><tr><th>Total Output</th><th>Total Hours worked</th><th>Hours required to increase output</th><th>Marginal cost of producing extra units</th></tr><tr><td>1</td><td>10</td><td>10</td><td>\$100</td></tr><tr><td>2</td><td>15</td><td>5</td><td>\$50</td></tr><tr><td>3</td><td>40</td><td>25</td><td>\$250</td></tr><tr><td>4</td><td>70</td><td>30</td><td>\$300</td></tr><tr><td>5</td><td>110</td><td>40</td><td>\$400</td></tr></table>	TABLE 2 Productivity of Workers				Total Output	Total Hours worked	Hours required to increase output	Marginal cost of producing extra units	1	10	10	\$100	2	15	5	\$50	3	40	25	\$250	4	70	30	\$300	5	110	40	\$400	All SIX correct.		
TABLE 2 Productivity of Workers																																	
Total Output	Total Hours worked	Hours required to increase output	Marginal cost of producing extra units																														
1	10	10	\$100																														
2	15	5	\$50																														
3	40	25	\$250																														
4	70	30	\$300																														
5	110	40	\$400																														
A#	(c) (ii)	Three tennis rackets.	Correct output identified.																														
A or M#	(c) (iii)	If diminishing returns are occurring, more variable factors are required to produce an extra unit of output, so it will cost more to produce. In Table 2, it takes five extra hours of labour to produce the second tennis racket, so it costs \$50. But diminishing returns start with the production of the third tennis racket, and it takes 20 more hours to produce (ie 25 hours), so its marginal cost is higher – costing \$250 to produce.	Identifies that if diminishing returns are occurring, then more resources are required (key idea), but answer may include minor errors or may not be a full answer.	Full explanation, including specific reference to at least some relevant figures in Table 2 to support their answer.																													
E	TWO (a) (c) THREE (c) (i) (c) (ii) (c) (iii)	A# M# A# A# M#			All FIVE # grades.																												

Code	Question	Evidence	Achievement	Merit	Excellence
A* and A*	FOUR (a) (d)		<p>(a) AR at point corresponding to equilibrium on Graph 3, and labelled, AND P_{PM} and Q_{PM} correctly located and labelled.</p> <p>(d) AR at point corresponding to P_1 on Graph 3 and labelled, AND P_{LR} and Q_{LR} correctly located and labelled.</p>		
A*	(c)		S1 at point corresponding to min AC in Graph 2, and labelled, AND P_1 and Q_1 correctly located and labelled.		
A or M*	(b)	<p>(i) At P_{PM} the perfectly competitive firm is making supernormal profit.</p> <p>(ii) Because firms in perfectly competitive markets have perfect knowledge (or there are no barriers to entry),</p> <p>(iii) other firms will enter the market in an attempt to get a share of the supernormal profits</p> <p>(iv) causing the market supply to increase.</p>	<p>Correctly states point (i)</p> <p>OR</p> <p>correctly states points (ii), (iii) and (iv).</p>	Answer correctly states all FOUR points.	

Code	Question	Evidence	Achievement	Merit	Excellence
A* and A and A*	FIVE (a) (i) (a) (ii) (c)	<p>GRAPH 4. MONOPOLY FIRM</p>	(a) (i) P and Q correctly located and labelled. (a) (ii) AC cuts (or is tangent to) AR at Q AND cuts MC at its lowest point AND labelled. (c) P_{PC} and Q_{PC} correctly located and labelled.		
M	(b)	Normal profit requires $AR = AC$ (or $TC = TR$) at a given output level, so at Q the AC curve must cut (or be tangent) to the AR curve for them to have the same value, and so show normal profit being earned.	Recognises normal profit occurring where $AR = AC$ (or $TC = TR$).	Recognises that the AR and AC curves must cut (or be tangent) <i>at the given level of output.</i>	
A or M*	(d)	<p>At Q_{PC}, $MC > MR$.</p> <p>Therefore the firm is incurring marginal losses (negative marginal profit) on each additional unit of output. This reduces the maximum level of total profit the firm could earn. Therefore there is an incentive for the firm to reduce output (to where $MR = MC$).</p> <p>Consequently, the firm will not willingly produce at the perfectly competitive market output level of Q_{PC}.</p>	<p>Identifies that profit maximisation occurs where $MR = MC$</p> <p>OR</p> <p>identifies that at the perfectly competitive equilibrium, $MR \neq MC$ (or $MC > MR$).</p>	Full explanation identifies the key economic idea(s), AND explains the idea to answer the question set.	
E	FOUR (a) (d) (c) (b) FIVE (a) (i) (c) (d)	A* A* A* M* A* A* M*			Any THREE A* and TWO M* grades.

Judgement Statement

Achievement	Achievement with Merit	Achievement with Excellence
Any 9 A or M	$2 \times M$ 9 other A or M	$1 \times E$ $2 \times M$ 9 other A or M

Appendix A – for Question Two (b)

